

Technical Note

Project:	18 East Street, Havant, Hampshire, PO9 1AQ	Date:	28 th August 2025 Updated 4 th November 2025
Subject:	Nitrogen neutrality calculation	Author:	Nicola French

1.0 Background

- 1.1. This briefing note has been prepared to provide information to Havant Borough Council (HBC) in support of a full planning application for the conversion of the former Barclays Bank, 18 East Street, Havant, PO9 1AQ into a care home facility for 6 residents and 3 supported living flats on the first floor. The information is provided to the Council under Regulation 63 of the Conservation of Habitats and Species Regulations 2017 (as amended) (the Habitats Regulations).
- 1.2. In January 2024, Defra issued a policy paper¹ notifying the designation of catchments sensitive to nutrient pollution. This includes the catchment of the Solent, into which the East Hampshire rivers feed, forming part of the Solent and Southampton Water Special Protection Area (SPA) and identified as being in unfavourable condition on account of nitrogen pollution². The implication of this is that any local planning authority within the catchment of the East Hampshire Rivers cannot grant consent for new residential development unless it can be shown to be net nitrogen neutral. A nitrogen calculation is therefore required to ensure that HBC has sufficient information to carry out an appropriate assessment to consider the impacts of the application on the Solent & Southampton SPA.
- 1.3. This note takes full account of all information provided by HBC on a dedicated web page³. The note also draws on the guidance resources on the Government website *Tools and resources for calculating nutrient neutrality*⁴, most recently updated on 24th May 2024 and uses the most recent update of the Solent nutrient neutrality calculator, also last updated on 27th May 2025⁵, to undertake the calculations.

¹ January 2024, DEFRA. The Designation of Sensitive Catchment Areas Notice 2024

² <https://www.gov.uk/government/publications/notice-of-designation-of-sensitive-catchment-areas-2024/notice-of-designation-of-sensitive-catchment-areas-2024>

³ <https://www.havant.gov.uk/planning-services/planning-policy/supplementary-planning-documents/nutrient-neutrality/nutrient-1>

⁴ <https://www.gov.uk/government/collections/tools-and-resources-for-calculating-nutrient-neutrality>

⁵ <https://www.gov.uk/government/publications/solent-nutrient-neutrality-calculator>

2.0 Nutrient neutrality calculations

2.1. **Box 1** below sets out the parameters and assumptions used to assess the additional nitrogen loading that the care home and supported living units will generate.

Box 1: Assumptions relevant to the assessment of additional nutrient loading for a care home and supported living flats at 18 East Street, Havant

- **Residential occupancy for the care home and supported living:** Havant Borough Council have advised that the relevant occupancy to be used is 1.0 for each of 9 new residential rooms that are to be created. This requires that both the flats upstairs and the care home rooms downstairs are conditioned to permit single occupancy only.
 - **Total wastewater produced by single person:** 120 litres per day. This is consistent with the requirements of Table 1 in HBC's Nutrient Position Statement & Mitigation Strategy⁶.
 - **Method of waste processing:** foul waste will be processed at Budds Farm Waste Water Treatment Works (WWTW)
 - **Total plot area:** The total area of the plot is 0.07ha.
- Land use:** the area of the red line comprises the old Barclays Bank on East Street with an area of hard standing to the rear. HBC requires that the land is considered as **commercial or industrial urban land**.
- **Proposed development:** Once built out, the scheme is classed as **residential urban land** (0.07ha) and will not result in a change of land use.

2.2. The most recent Natural England Nitrogen Calculator for the Solent has been used to calculate the nutrient load generated by the treated foul for the supported living.

⁶ Havant Borough Council, January 2024. Position Statement and Mitigation Plan for Nutrient Neutral Development

Water infrastructure information	
Description of required information	Data entry column - user inputs required
Date of first occupancy (dd/mm/yyyy):	01/06/2026
Average occupancy rate (people/dwelling or people/unit):	1.00
Water usage (litres/person/day):	120
Development proposal (dwellings/units):	9
Include deductible acceptable loading?	Yes
Wastewater treatment works:	Budds Farm WwTW
Current wastewater treatment works N permit (mg TN/litre):	7.70
Not applicable	Not applicable
Not applicable	Not applicable
Final calculation of nutrient load from wastewater	
Description of values generated	Values generated
Wastewater nutrient loading	
Additional population (people):	9.00
Wastewater by development (litres/day):	1080.00
Annual wastewater TN load (kg TN/yr):	2.73

- 2.1. The calculations show that the treatment of foul from the care home and x3 supported living flats will generate a loading of **2.73 kg** of nitrogen per year. Note that the 20% buffer has not been applied at this stage. Rather it is applied to the final calculation once the overall budget for the site is established.
- 2.2. To address the overall net nitrogen budget for the scheme, it is important to also consider how rates of nitrogen leaching from the ground will change in response to a changed land use. Stages 2 & 3 of the calculation assess the total nitrogen loading to the water environment that is currently taking place and compares this to the loading that will occur once the site has been developed. Stages 2 & 3 are set out on the following pages.

Current land use information	
Description of required information	Data entry column - user inputs required
Operational catchment:	East Hampshire Rivers
Soil drainage type:	Naturally wet
Annual average rainfall (mm):	750.1 - 800 ▼
Within nitrate vulnerable zone (NVZ):	Yes
Current land uses	
Existing land use type(s) - user inputs required	Area (ha) - user inputs required
Commercial/industrial urban land	0.07
	0.54
	0.00
	0.00
	0.00
	0.00
	0.00
	0.00
	0.00
	0.00
	0.00
	0.00
	0.00
	0.00
	0.00
	0.00
	0.00
	0.00
	0.00
Totals:	0.07

Future land uses	
New land use type(s) - user inputs required	Area (ha) - user inputs required
Residential urban land	0.07
	1.01
	0.00
	0.00
	0.00
	0.00
	0.00
	0.00
	0.00
	0.00
	0.00
	0.00
	0.00
	0.00
	0.00
	0.00
Totals:	0.07

- 2.3. Finally, the calculator generates a net nitrogen loading for the scheme, which is set out in Stage 4, on the following page.

Total nutrient budget calculations	
Description of values generated	Values generated
Wastewater TN load (kg TN/year):	2.73
Net land use TN change (kg TN/year):	0.47
TN budget:	3.20
TN budget + 20% buffer:	3.84
Annual nutrient budget	
The total annual nitrogen load to mitigate is (kg TN/yr):	3.84

- 2.3. The calculations show that the new residential unit will generate a net increase of **3.84kg** of nitrogen per year once occupied. To ensure net nitrogen neutrality, **mitigation is required** to address the additional nitrogen load that the development will generate.

3.0 Mitigation requirements

- 3.1. HBC has published a Position Statement that sets out the Council's approach to the mitigation of nitrogen⁷, required to secure new development as nitrogen neutral. HBC runs the Warblington Farm nitrogen mitigation scheme, available to a limited scope of development.

- 3.2. Paragraph 3.17 states that:

Only planning applications for 15 dwellings or less (net) (C3) or are regeneration projects within the regeneration areas (as defined at Appendix 1) granted on or after 18 November 2022 will be able to use Warblington Farm.

- 3.3. As a scheme that sits just outside of the Havant regeneration area, but which provides supported living at fewer than 15 units, it is anticipated that HBC will consider that purchase of nitrogen credits from the Warblington Farm scheme will be an appropriate form of offset. To ensure a nitrogen neutral development, 3.84 credits will be required and will be secured through an appropriate planning mechanism.

⁷ Havant Borough Council, January 2024. Position Statement and Mitigation Plan for Nutrient Neutral Development

4.0 Conclusion

- 4.1. A nitrogen budget calculated in line with the most current Natural England guidance and calculator for a net increase of 3 supported living flats (1 resident per flat) and a care home for 6 residents will generate a surplus of 3.84kg TN per year. Nitrogen credits, secured from the Council's own Warblington Farm nitrate offset scheme, will be used to mitigate the impacts of the additional nitrogen load on the Solent Habitats Sites. This will ensure that the scheme will not adversely affect the integrity of the Solent Habitats Sites, either alone or in combination with other plans and projects, allowing HBC to conclude a positive appropriate assessment under the tests of the Habitats Regulations.

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